

DO NOT ENTER: /A.P./

Amendments to the Claims

12/22/2009

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of ~~providing~~treating water comprising:
providing water to be treated into a storage vessel;
passing a first water stream from the storage vessel through a depleting compartment of an ~~electrochemical~~electrodeionization device;
applying an electric current through the electrodeionization device to produce a second water stream from the depleting compartment having an ~~LSI~~Langelier Saturation Index (LSI) of less than about 0;
passing the second water stream through a cathode compartment of the ~~electrochemical~~electrodeionization device to produce a ~~third~~treated water stream, ~~the third treated water stream being less corrosive than the second water stream and having an LSI of less than about 0; and~~
introducing at least a portion of the treated water stream into the storage vessel.
2. (Canceled) ~~The method of claim 1 wherein corrosivity of the second water stream is reduced by passing the water through the cathode compartment.~~
3. (Currently Amended) The method of claim 1 wherein the ~~third~~treated water stream is made less corrosive by reducing the concentration of oxidative species in the water stream.
4. (Canceled) ~~The method of claim 1 wherein the electrochemical device comprises an electrodeionization device.~~

5. (Currently Amended) A method of providing potable water comprising:
providing water be treated;
introducing a first portion of the water to be treated into a storage vessel;
passing a first water stream comprising a second portion of the water to be treated
through a cathode compartment of an ~~electrochemical~~electrodeionization device to
produce a second water stream;
circulating a third water stream through a concentrating compartment and through
an anode compartment of the electrodeionization device;
passing~~treating~~ the second water stream ~~through~~in a depleting compartment of the
~~electrochemical~~electrodeionization device to produce a ~~third water stream~~treated potable
water having an LSI a Langelier Saturation Index (LSI) of less than about 0, the third
~~water stream being less corrosive than the first water stream; and~~
introducing the treated potable water into the storage vessel.
6. (Canceled) ~~The method of claim 5 wherein corrosivity of the first~~
~~water stream is reduced by passing the water through the cathode compartment.~~
7. (Currently Amended) The method of claim 5 wherein the ~~third water~~
~~stream~~treated potable water is made less corrosive by reducing the concentration of
oxidative species in the ~~water stream~~first water stream.
8. (Canceled) ~~The method of claim 5 wherein the electrochemical device~~
~~comprises an electrodeionization device.~~
9. (Withdrawn) A method of retaining a residual chlorine level in water
comprising:
removing greater than 90% of active chlorine from a first water stream;
passing the water stream through a depleting compartment of an electrochemical
device;
removing a portion of any ions dissolved in the water stream;

introducing the water stream to a loop, the loop including a storage vessel; and
introducing active chlorine in a second water stream into the loop at a rate
adequate to maintain an effective average chlorine concentration in the loop.

10. (Withdrawn) The method of claim 9 wherein the effective chlorine
concentration is greater than 25% of the chlorine concentration in the first water stream.

11. (Withdrawn) A method of selectively retaining ions in a water supply
comprising:

passing a feed water through a depleting compartment of an electrochemical
device, the feed water comprising monovalent and divalent ions;

removing at least 30% of the divalent ions from the feed water and retaining at
least about 80% of a species selected from the group consisting of silica, boron and
fluoride, to produce a treated water; and

supplying the treated water for household consumption.

12. (Withdrawn) A method of producing a purified water comprising:

passing a water stream through a depleting compartment of an electrochemical
device; and

adjusting a voltage applied to the electrochemical device to control the current
passing through the electrochemical device at a level adequate to remove greater than
about 25% of any hardness ions in the water stream and inadequate to remove greater
than about 10% of any fluoride or silica species from the water stream.

13. (Withdrawn) The method of claim 12 wherein less than 10% of any fluoride
species is removed.

14. (Withdrawn) The method of claim 12 wherein less than 10% of any silica
species is removed.

15. (Withdrawn) The method of claim 12 further comprising passing the purified water through the depleting compartment a second time.

16. (Withdrawn) The method of claim 12 wherein the electrochemical device comprises an electrodeionization device.

17. (Withdrawn) The method of claim 12 wherein the electrochemical device comprises an electrodialysis device.

18. (Withdrawn) A method comprising:
passing a feed water through a bed of ion exchange material to remove greater than 30% of any hardness ions from the feed water to produce a softened water;
supplying the softened water for household consumption; and
discharging a concentrated solution comprising calcium, wherein the sum of the ionic content of the softened water and the ionic content of the concentrated solution is no greater than the total ionic content supplied by the feed water.

19. (Withdrawn) The method of claim 18 wherein the softened water is less corrosive than the feed water.

20. (Withdrawn) The method of claim 18 further comprising applying an electric current across the bed of ion exchange material.

21. (Canceled) ~~The method of claim 1, further comprising introducing the third water stream into a storage vessel, and wherein the first water stream comprises water from the storage vessel.~~

22. (Canceled) ~~The method of claim 8, further comprising introducing the third water stream into a storage vessel.~~

23. (New) The method of claim 1, further comprising supplying at least a portion of water from the storage vessel for a household consumption selected from the group consisting of bathing, laundering, and dishwashing.
24. (New) The method of claim 1, further comprising circulating a concentrate through the concentrating and anode compartments of the electrodeionization device.
25. (New) The method of claim 24, further comprising discharging to waste a portion of the concentrate circulating through the concentrating and anode compartments.
26. (New) The method of claim 1, wherein all of the water from the depleting compartment is passed through the cathode compartment.
27. (New) The method of claim 5, further comprising supplying at least a portion of water from the reservoir for household consumption.
28. (New) The method of claim 27, further comprising post treating the at least a portion of water from the reservoir with at least one of actinic radiation, ultrafiltration, and microfiltration, prior to supplying the water for household consumption.